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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,072	01/08/2004	M. George George	200315243-US	5433

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EXAMINER
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CAO, DIEM K

ART UNIT	PAPER NUMBER
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2194

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/753,072

Applicant(s)

GEORGE, M. GEORGE

Examiner

Diem K. Cao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/8/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-43 are presented for examination.

#### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-22 and 25 are rejected under 35 U.S.C. 101 because the language of the claims raise a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. In particular, none of the claims required the use of hardware accomplish the steps.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 10-15, 17 and 19-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saboff (U.S. 6,154,878) in view of Takimoto (U.S. 2001/0052034 A1).

5. As to claim 1, Saboff teaches creating an interface module (col. 5, lines 12-24), creating a plurality of proxy functions within the interface module corresponding to a plurality of functions within the implementation module (col. 5, lines 12-24), when the implementation module is to be replaced (col. 14, lines 34-53 and col. 16, lines 43-45), the interface module blocking entry by the system into the implementation module (col. 14, lines 34-53), wherein the system uses the functions within the implementation module by calling the proxy functions (col. 6, lines 43-66) and some of the global variables of the implementation module are stored within the interface module (col. 6, lines 38-40).

6. However, Saboff does not teach tracking entries into and exits out of the implementation module by the system, and when the number of entries corresponds to the number of exits, replacing the implementation module. Takimoto teaches tracking entries into and exits out of the implementation module by the system, and when the number of entries corresponds to the number of exits, replacing the implementation module (page 9, paragraphs 123-125).

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Saboff and Takimoto because the Takimoto teaches a method for updating a program component loaded in a server in an N-tier client-server environment, whereby a program can be dynamically and efficiently loaded into a server can be dynamically and efficiently replaced, without service interruption.

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8. As to claim 2, Saboff teaches no state information of the implementation module is stored within the implementation module (col. 6, lines 38-45).

9. As to claim 3, Saboff teaches the interface module blocks entry by the system into the implementation module only when it is safe to do so (col. 14, lines 34-53).

10. As to claim 4, Saboff teaches the system is an operating system (col. 2, lines 41-45).

11. As to claim 5, Saboff teaches the system is an application (col. 2, lines 41-45).

12. As to claim 6, Saboff does not teach the interface module performs the tracking step. Takimoto teaches the distributed call control unit performs the tracking step (page 9, paragraph 125).

13. As to claim 7, Takimoto teaches the tracking is performed using a reference counter (page 9, paragraph 125).

14. As to claim 10, Saboff teaches the interface module is statically linked to the application (col. 4, lines 60-61).

15. As to claim 11, Saboff teaches the interface module is dynamically linked to the application (col. 4, lines 60-61).

16. As to claim 12, Saboff teaches the system includes a plurality of threads and at least some of the threads use the implementation module (col. 14, lines 41-44).

17. As to claim 13, Saboff teaches some of the state information of the implementation module is stored on a heap (see Fig. 5 and associated text).

18. As to claim 14, Saboff teaches the implementation module is replaced with an updated version (col. 1, lines 13-16).

19. As to claim 15, Saboff teaches the implementation module is replaced with a corrected version (col. 1, lines 13-16).

20. As to claim 17, see rejections of claims 1 and 3 above.

21. As to claim 19, Saboff teaches moving some global variables from the implementation module to another module (col. 6, lines 38-40).

22. As to claim 20, see rejection of claim 2 above.

23. As to claim 21, see rejection of claim 3 above.

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24. As to claim 22, see rejection of claim 1 above.

25. As to claim 23, see rejection of claim 1 above. Saboff further teaches a memory, a processor (inherent being in a computer system, and a program is executed) arranged for relaying calls to use an implementation function to a corresponding proxy function (col. 5, lines 41-52).

26. As to claim 24, see rejection of claim 1 above.

27. As to claim 25, see rejection of claim 17 above.

28. As to system claim 26, it is the same as the method claim of claim 1 and is rejected under the same ground of rejection.

29. As to system claim 27, it is the same as the method claim of claim 17 and is rejected under the same ground of rejection.

30. As to system claim 28, it is the same as the method claim of claim 24 and is rejected under the same ground of rejection.

31. As to system claim 29, it is the same as the method claim of claim 25 and is rejected under the same ground of rejection.

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32. As to claim 30, see rejection of claim 1 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

33. As to claim 31, see rejection of claim 17 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

34. As to claim 32, see rejection of claim 24 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

35. As to claim 33, see rejection of claim 25 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

36. As to claim 34, see rejection of claim 1 above. Saboff further teaches a storage media (inherent from the system is a computer).

37. As to claim 35, see rejection of claim 17 above. Saboff further teaches a storage media (inherent from the system is a computer).

38. As to claim 36, see rejection of claim 24 above. Saboff further teaches a storage media (inherent from the system is a computer).

39. As to claim 37, see rejection of claim 25 above. Saboff further teaches a storage media



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(inherent from the system is a computer).

40. As to claim 38, Saboff teaches a binary file including an interface module and a replaceable implementation module created according to the method of claim 17 (inherent from being a file that being executed by a computer, wherein the computer process binary code only).

41. As to claim 39, Saboff teaches a binary file including an interface module as claimed in claim 22 (inherent from being a file that being executed by a computer, wherein the computer process binary code only).

42. As to claim 40, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 1 (col. 4, line 56 - col. 5, line 10).

43. As to claim 41, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 17 (col. 4, line 56 - col. 5, line 10).

44. As to claim 42, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 24 (col. 4, line 56 - col. 5, line 10).

45. As to claim 43, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 25 (col. 4, line 56 - col. 5, line 10).

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46. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saboff (U.S. 6,154,878) in view of Takimoto (U.S. 2001/0052034 A1) further in view of Hicks (Dynamic Software Updating).

47. As to claim 16, Saboff teaches each proxy function has the calling name of the corresponding function (col. 5, lines 12-24). However, Saboff does not explicitly teach the corresponding function is renamed. Hicks teaches the corresponding function is renamed (page 15, section 3.2.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Saboff, Takimoto and Hicks because renaming functions provides more freedom in timing updates, since the program is aware of both versions (page 16, left column, second paragraph)

48. As to claim 18, see rejection of claim 16 above.

49. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saboff (U.S. 6,154,878) in view of Takimoto (U.S. 2001/0052034 A1) further in view of Nakajima (U.S. 6,289,510 B1).

50. As to claim 8, Saboff does not teach tracking is performed using reference flags. Nakajima teaches tracking is performed using reference flag (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Saboff, Takimoto and Nakajima because it provides an alternative method to perform

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the tracking step.

51. As to claim 9, Saboff does not teach the tracking is performed using reference counts and reference flags. See rejections of claims 7 and 8 above.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K. Cao whose telephone number is (571) 272-3760. The examiner can normally be reached on Monday - Friday, 5:30AM - 2:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

**MENG-AI AN**  
**SUPERVISORY EXAMINER**  
**TECHNOLOGY CENTER 2100**